

## WHAT IS CLAIMED IS:

1. A system to rate refinery feed stocks for the formation of deposits on solid refinery surfaces comprising:

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(a) a solid nub having a deposit surface,

(b) means for controlling the magnitude and duration of the temperature of said surface, such that the temperature emulates the temperature variation of the solid refinery surface,

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(c) means for introducing fuel and/or fuel containing additives onto said surface, and

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2. The system of claim 1 further comprising a means for weighing said nub.

3. The system of claim 1 further comprising an enclosure and a means for introducing gas into said enclosure.

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4. The system of claim 1 wherein said nub is steel, aluminum, brass or any solid material, or combination thereof.

5. The system of claim 1 wherein said means to control temperature includes a coiled cable heater, thermocouple and a temperature programmer.

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6. The system of claim 1 wherein said means for introducing fuel and/or fuel additives, including a syringe pump and a hypodermic needle.

7. The system of claim 3 wherein said enclosure is a glass bell shaped shield.

8. The system of claim 3 wherein said gas is air.

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9. The system of claim 3 wherein said gas is inert.

10. A method to rate fuels and fuel additives for the formation of deposits onto a solid, having a surface of a given shape and material comprising:

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(a) controlling the magnitude and duration of the temperature of said surface,

(b) introducing fuel and/or fuel containing additives in controlled amounts onto said surface, and

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(c) weighing said solid before and after said introducing step to determine the amount of deposit onto said surface.